

ALMA: By the numbers

Firmly footed on our own planet, the Atacama Large Millimeter/submillimeter Array (ALMA) is the world's most powerful observatory for studying some of the oldest and most distant galaxies. Funded through an international collaboration that includes the U.S. National Science Foundation, ALMA studies the universe at the long-wavelength millimeter and submillimeter range of light. This allows researchers to probe areas around young stars for planets even while they are just forming.



66 radio antennas

that are often nearly 40 feet in diameter each and can accurately identify a golf ball 9 miles away. (This is instead of having one enormous dish approximated at 46K feet wide.)



years



of construction that required thousands of scientists and engineers from around the world.



16,570 feet



above sea level as well as most of Earth's water vapor and much of Earth's atmosphere that can blur and distort light. ALMA is among the highest, ground-based instruments on Earth.



-452° Fahrenheit

so ALMA's electronic detectors can amplify and convert the radio signals it collects. This very cold temperature minimizes introducing noise to the signal.



410 years

without significant rainfall (1570-1971). This makes the Atacama Desert one of the world's driest places.



NATIONAL SCIENCE FOUNDATION